Firm Docket No.: P03-1004

Application No.: 10/719,316

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CLAIMS LISTING

1. (Currently Amended) A memory module standardized and connectable to a computer body generating a predetermined number of address signals, and a plurality of select signals representing a select or unselected state of each of memory spaces having a capacity corresponding to the predetermined <u>number</u> of the address signals, <u>a pulse-shaped clock signal</u>, and a plurality of clock enable signals representing a valid or invalid state of an input of the clock signal for each of the plurality of the memory spaces, the memory module comprising:

a memory receiving a memory select signal representing a select or unselected state and a plurality of address signals greater than the predetermined number of the address signals, and permitting data corresponding the plurality of the address signals to be accessible when the memory select signal represents a selected state; and

the memory receiving the clock signal and a memory clock enable signal representing a valid or invalid state of an input of the clock signal, and operating according to the clock signal when the clock enable signal is valid;

a memory circuit receiving the predetermined number of the address signals and a plurality of select signals from the computer body, generating the memory select signal and an additional address signal added to the predetermined number of the address according to the inputted select signals, and providing the generated memory select signal, the generated additional address signal, and the predetermined number of the inputted address signals to the memory to permit the computer body to access data corresponding thereto; and

the memory circuit receiving the clock signal and the plurality of the clock enable signals, generating the memory clock enable signal according to the plurality of the inputted clock enable signals, and providing the memory clock enable signal and the inputted clock signal to the memory.

2. (Original) The memory module of claim 1, wherein the memory circuit makes the memory select signal represent a selected state of the memory when either of the plurality of the inputted select signals represents a selected state of the memory space, and makes the memory select signal represent an unselected state of the memory when all the plurality of the inputted select signals represent an unselected state of the memory space.

App. No.: 10/719,316 Page 2 of 8 Firm Docket No.: P03-1004

Application No.: 10/719,316 Firm Docket No.: P03-1004

3. (Original) The memory module of claim 1, wherein the computer body generates two types of select signals representing a selected or unselected state of two memory spaces of a capacity corresponding to the predetermined number of the address signals,

and wherein the memory circuit receives either of the two types of the select signals from the computer body, and provides the either of the select signals as the additional address to the memory.

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- 5. (Original) The memory module of claim 1, wherein the memory circuit makes the memory clock enable signal represent a valid state of a clock signal input of the memory when any one of the inputted plurality of the clock enable signals represent a valid state of a clock signal input of the memory, and makes the memory clock enable signal represent an invalid state of a clock signal input of the memory space when all the inputted plurality of the clock enable signals represent an invalid state of a clock signal input of the memory space.
- 6. (Original) The memory module of claim 1, wherein the additional address signal represents an address upper than one represented by the predetermined number of the address signals.
- 7. (Currently Amended) A memory module standardized and connectable to a computer body generating a predetermined number of address signals, and a select signal representing a selected or unselected state of each of a plurality of memory spaces having a capacity corresponding to the predetermined number of the address signals, a pulse-shaped clock signal, and a plurality of clock enable signals representing a valid or invalid state of an input of the clock signal for each of the plurality of the memory spaces, the memory module comprising:

a memory receiving a plurality of address signals greater than the predetermined number of the address signals and permitting data corresponding thereto to be accessible; and

the memory receiving the clock signal and a memory clock enable signal representing a valid or invalid state of an input of the clock signal, and operating according to the clock signal when the clock enable signal is valid;

App. No.: 10/719,316 Page 3 of 8 Firm Docket No.: P03-1004

Firm Docket No.: P03-1004

Application No.: 10/719,316

a memory circuit receiving the predetermined number of the address signals and a select signal, generating an additional address added to the predetermined number of the address signals according to the inputted select signal, and, by providing the additional address signal and the predetermined number of the inputted address signals to the memory, permitting data corresponding thereto to be accessible by the computer body; and

the memory circuit receiving the clock signal and the plurality of the clock enable signals, generating the memory clock enable signal according to the plurality of the inputted clock enable signals, and providing the memory clock enable signal and the inputted clock signal to the memory.

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8. (Currently Amended) A memory-assist module wherein

when a memory connected to a computer body receives a <u>pulse-shaped clock signal</u>, a <u>memory clock enable signal representing a valid or invalid state of an input of the clock signal</u>, a memory select signal representing a select or unselected state, and a plurality of address signals greater than a predetermined number of address signals, <u>operates according to the clock signal</u> when the clock enable signal is valid, and permits data corresponding to the plurality of the address signals to be accessible by the computer body when the memory select signal represents a selected state,

the computer body generating the predetermined number of the address signals, and a plurality of select signals representing a select or unselected state of each of a plurality of memory spaces having a capacity corresponding to the predetermined number of the address signals, the clock signal, and a plurality of clock enable signals representing a valid or invalid state of an input of the clock signal for each of the plurality of the memory spaces,

the clock signal, the plurality of the clock enable signals, the predetermined number of the address signals, and the plurality of the select signals are inputted from the computer body, the memory clock enable signal is generated according to the plurality of the inputted clock enable signals, the memory clock enable signal and the inputted clock signal are provided to the memory, the memory select signal and an additional address signal added to the predetermined number of the address signals are generated according to the inputted select signals, and the generated memory select signal, the generated additional address signal, and the predetermined number of the inputted address signals are provided to the memory.

App. No.: 10/719,316 Page 4 of 8 Firm Docket No.: P03-1004

Firm Docket No.: P03-1004

Application No.: 10/719,316

9. (Currently Amended) A memory-assist module wherein

when a memory connected to a computer body receives a <u>pulse-shaped clock signal</u>, a <u>memory clock enable signal representing a valid or invalid state of an input of the clock signal</u>, a plurality of address signals greater than a predetermined number of [a] address signals, <u>operates according to the clock signal when the clock enable signal is valid</u>, and permits the corresponding data to be accessible by the computer body,

the computer body generating the predetermined number of the address signals, and a select signal representing a select or unselected state of each of a plurality of memory spaces having a capacity corresponding to the predetermined number of the address signals, the clock signal, and a plurality of clock enable signals representing a valid or invalid state of an input of the clock signal for each of the plurality of the memory spaces.

the clock signal, the plurality of the clock enable signals, the predetermined number of the address signals, and a select signal are inputted from the computer body, the memory clock enable signal is generated according to the plurality of the inputted clock enable signals, the memory clock enable signal and the inputted clock signal are provided to the memory, an additional address signal added to the predetermined number of the address signals is generated according to the inputted select signal, and the additional address signal and the inputted predetermined number of the address signals are provided to the memory.

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App. No.: 10/719,316 Page 5 of 8 Firm Docket No.: P03-1004